



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,725	11/08/2005	Rudolf Bonsch	MDP-103	5175
54630 7590 02/11/2009 ROBERTS & ROBERTS, LLP ATTORNEYS AT LAW P.O. BOX 484 PRINCETON, NJ 08542-0484				
EXAMINER				
PO, MING CHEUNG				
ART UNIT		PAPER NUMBER		
1797				
MAIL DATE		DELIVERY MODE		
02/11/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/537,725

Applicant(s)

BONSCH ET AL.

Examiner

MING CHEUNG PO

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

RESPONSE TO AMENDMENT

Office Action Summary

1. This is the response to amendment for application 10/533,725 filed on 11/07/2008.
2. Claims 1 - 3 are pending and have been fully considered.
3. The 35 U.S.C. 112 rejection has been withdrawn in light of applicants' amendments.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 – 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over JOHNSON (U.S. 5,520,708) in view of KOVACS (WO 03/040081).

JOHNSON teaches a method to reduce the crystallization temperature of a mixture of a fatty acid oil ester-petroleum distillate fuel blend. JOHNSON teaches in lines 15 – 18 of column 3 that the esters used are prepared by transesterification of native oils. Preferably, the esters are taught in lines 19 - 32 of column 3 to be prepared by a type of **transesterification** known as alcoholysis in which the acyl groups in the triglycerides of the oils are exchanged with an alcohol such as **methanol**, so that nearly all the acyl groups are recovered as methyl esters. JOHNSON further teaches that an acid such as **sulfuric acid or hydrogen chloride** may be used as the acid catalyst

when large amounts of free fatty acids are present in the oil.

JOHNSON teaches an example in lines 65 – 67 of column 3 and lines 1 – 14 of column 4 where a basic catalyst of sodium alkoxide is used and stirred with the reactants at **32°C (between 25 and 60°C)**.

JOHNSON does not seem to explicitly state that the methyl ester is intensively mixed at temperatures between 25 and 60°C with a strong acid to form an emulsion.

However, KOVACS teaches on the second paragraph of page 3 that the reaction that JOHNSON teaches is mixed and reacted in a static mixer and then the mixture is subjected to a high shear (**in-line mixing**) in the homogenizer to form an emulsion (**emulsion**). The mixture still contains the acid catalyst (**strong acid**).

JOHNSON further teaches that the reaction mixture was then extracted with hexane, washed with water (**subjected to a water wash**), and the esters were obtained as the residue after evaporation of the solvent under vacuum (**subsequently dried**).

In example 1, JOHNSON teaches that hexanes and water were added to the reaction mixture to induce a phase separation. The upper phase, an ester-rich layer, was washed with additional water and isolated until it became clear (**an ester layer separated from the emulsion formed is subjected to a thorough water wash**). The solvent was then evaporated (**subsequently dried**).

Regarding claim 3, JOHNSON does not appear to explicitly state the water wash is carried out in a wash column according to the counter current principle or by means of a mechanically intensive mixer.

However, it would be obvious to one of ordinary skill in the art to use a

separatory funnel to perform the water washes. A separatory funnel is a wash column that utilizes the counter current principle to separate the organic layer and the aqueous layer.

One of obvious skill in the art would recognize that a separatory funnel is a common piece of equipment that is used in water washes.

Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

Response to Arguments

6. Applicants' arguments, see pages 5 and 6, filed 11/07/2008, with respect to the rejection(s) of claim(s) 1-3 under 35 U.S.C. 102 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of JOHNSON and KOVACS. JOHNSON and KOVACS teaches a process for the transesterification of vegetable oils with methanol to form an emulsion and then separating the ester layer and washing it with water and subsequently drying the mixture.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MING CHEUNG PO whose telephone number is (571)270-5552. The examiner can normally be reached on 9:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571)272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ellen M McAvoy/

Primary Examiner, Art Unit 1797

Ming Cheung Po